



NASA SBIR 2007 Phase I Solicitation

O2.01 Optical Tracking and Image Analysis

Lead Center: KSC

Participating Center(s): AFRC, MSFC

GPS or Radar-aided Autofocus

Investigate using range information from radar, GPS, or other sources, for autofocusing long-range optics systems. Optical tracking provides valuable data during aerospace operations, but large distances between the target and the optical system can lead to distortions caused by atmospheric disturbances. Range information might be useful for a computer-controlled optical focusing system to decrease this distortion. The initial investigation will determine if this approach could be useful using one or multiple cameras, how it might be implemented, and if range information could be combined with other distortion-reduction techniques.

New Optical Tracking Systems

Investigate innovative and unconventional ways to use optical or hyperspectral imaging systems to visualize and track vehicles during launch and landing operations. Possibilities might include, but are certainly not limited to, unmanned aerial vehicle platforms or balloons. The system must be implemented unobtrusively in a spaceport environment. The initial investigation should result in a proof-of-concept demonstration in an appropriately scaled environment.